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Introduction

The U.S. labor market has been struggling with job loss since the start of the year. The economy has lost 760,000 jobs since January, and the unemployment rate has risen to 6.1 percent, up from 4.7 percent a year ago. Underemployment has also surged, reaching a 14-year high in September.

The future outlook is even bleaker. The credit crunch appears to be spilling over from Wall Street to Main Street with consumers and businesses beginning to have trouble obtaining credit. We will likely see declines in consumer spending in the third and fourth quarters of this year and an acceleration of the pace of job loss over the next several months.

Forecasts of future unemployment rates vary, but a look at past recessions (particularly the severe early 1980s and mid-1970s downturns) suggests that unemployment in the range of 8 to 9 percent would not be surprising. Evidence from the last two recoveries suggests that employment levels would not fully recover until mid-2010 or beyond.

A recovery package that focused on job creation through infrastructure investment could help reduce the severity and length of the job market downturn. A broad-based rescue package should be at least as large as the package passed in January, and should include infrastructure investments, aid to states, and

consumer supports.¹ The infrastructure investment component should include \$75 billion in new investments that would focus on “ready-to-go” and “fix-it-first” projects that could begin immediately and employ over 1 million people. This recovery package would provide a boost to the overall economy and stimulate jobs across industries and across the nation.

This testimony gives some background context for understanding the length and depth of a downturn in the labor market, and discusses the job market implications—in terms of timing and industry impact—of investments in infrastructure projects.

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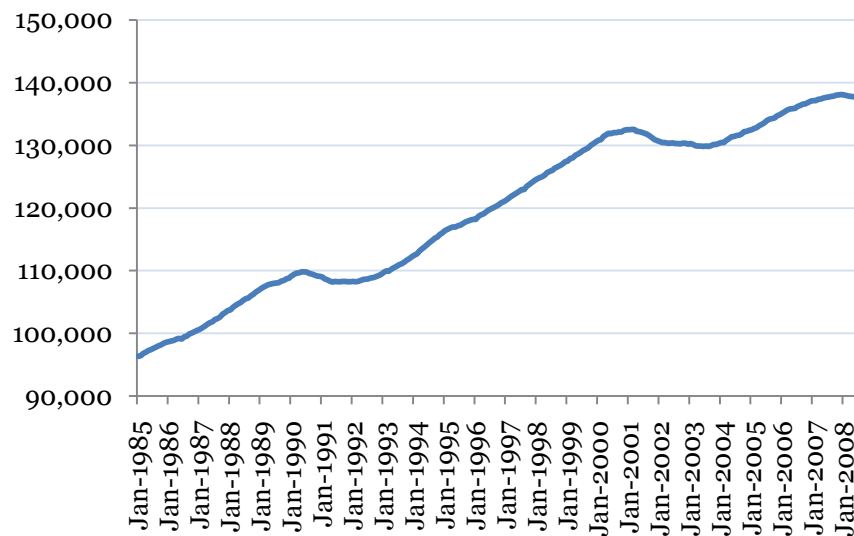
¹ John Irons and Ethan Pollack, “A Rescue Package for Main Street” Economic Policy Institute, October 27, 2008.

Duration of Job Losses

The U.S. economy has experienced 10 recessions since 1945 with an average duration of 10 months as measured from the start of the recession to the bottom according to the “official” measures by the National Bureau of Economic Research (NBER). During these periods, economic activity in general declines with the economy experiencing lower total output, reduced capacity utilization, a decline in the number of jobs, and a resulting increase in the unemployment rate. During the recovery, economic output increases and people are rehired.

In the past two recessions, however, employment growth has been sluggish even after the official end of the recession. Both the 1990-91 and the 2001 recession lasted only 8 months, but it took the labor market 11 months and 30 months, respectively, to finally hit bottom (see Figure 1). Further, with sluggish growth even after hitting bottom, it took 32 months and 48 months to regain the total number of jobs that existed prior to the downturn.²

**FIGURE 1. TOTAL NONFARM EMPLOYMENT, JANUARY 1985 - SEPTEMBER 2008
(THOUSANDS)**



Cycle	Employment Peak		Employment Trough			Recovery	
	Month	Number	Month	Number	Duration	Month	Duration
Early 1990s	Jun-1990	109,817	May-1991	108,196	11	Feb-1993	32
Early 2000s	Feb-2001	132,530	Aug-2003	129,822	30	Feb-2005	48
Current	Dec-2007	138,078					

* Duration is measured in months from employment peak; number of jobs in thousands.

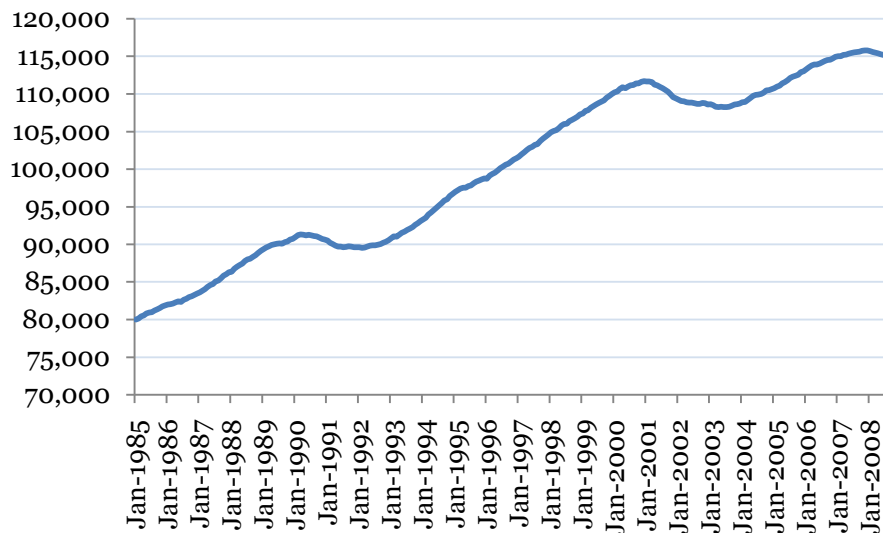
² This is a modest measure of a full recovery since it does not include job creation to provide for population growth. Obviously, recovery periods by this measure would be even longer than noted in this document.

A similar pattern emerges when looking at other measures of employment. Total private employment in the 1990-91 and 2001 recessions took 23 and 31 months to hit bottom; and 38 and 54 months to recover (see Figure 2.)

The construction industry took longer to recover in the 1990s, taking over 6 years to reach pre-recession levels. Although it recovered faster during the 2000s (see Figure 3), that situation was an exception, owing in large part to the unique construction boom. We can unfortunately expect the construction labor market to look more like the 1990s.

We can thus expect continuing declines in overall employment and a continuing weakness in labor markets for another 2 to 3 years, with total private and construction employment taking as much as 4 years to fully recover.

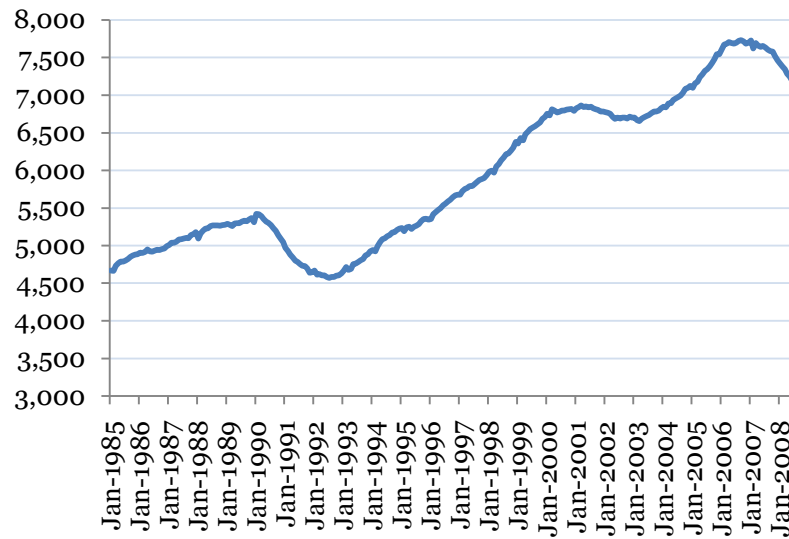
**FIGURE 2. TOTAL PRIVATE EMPLOYMENT, JANUARY 1985 - SEPTEMBER 2008
(THOUSANDS)**



	Employment Peak		Employment Trough			Recovery	
	Month	Number	Month	Number	Duration	Month	Duration
Early 1990s	Mar-1990	91,317	Feb-1992	89,557	23	May-1993	38
Early 2000s	Dec-2000	111,681	Jul-2003	108,231	31	Jun-2005	54
Current	Nov-2007	115,759					

* Duration is measured in months from employment peak; number of jobs in thousands.

**FIGURE 3. CONSTRUCTION EMPLOYMENT, JANUARY 1985 - SEPTEMBER 2008
(THOUSANDS)**



	Employment Peak		Employment Trough			Recovery	
	Month	Number	Month	Number	Duration	Month	Duration
Early 1990s	Jan-1990	5,422	Jul-1992	4,570	30	Mar-1996	74
Early 2000s	Mar-2001	6,862	Mar-2003	6,654	24	Mar-2004	36
Current	Sep-2006	7,732					

* Duration is measured in months from employment peak; number of jobs in thousands.

Timing and Impact of Federal Investments

National investments in infrastructure—especially transportation infrastructure—have been criticized as being too slow to have an impact in an economic downturn.

Economists often point to what are called “inside” and “outside” lags. The “inside” lag includes the time it takes to consider and pass legislation and to plan projects. The “outside” lags include the time it takes for those projects to put people to work and to be completed. In the past, both the inside and outside lags have often meant that spending on infrastructure comes too late to help the economy. For example, a 1986 study by the GAO found that only about a third of infrastructure spending has been put to use within a year of the 1983 jobs package, and about half was spent within 2 years.³

There are several reasons why such criticism is less founded today, and why a properly designed recovery package can have a swift impact on jobs and the economy.

First, Congress itself can reduce the “inside lag” by quickly passing a recovery package. Congress can also require that states and localities must begin projects within a certain time period, such as 90 days, from date of enactment. A strong signal from Congress today would allow states to begin to craft their priorities so they can be ready to go when stimulus is passed.

Second, in a time when there are huge unmet needs, spending can have a more immediate impact. Virtually every state, locality, and school district will have already identified a variety of “ready-to-go” projects that are simply waiting for funding. Many of these projects include maintenance and repair backlogs that exist because of inadequate funding. Congress need not dream up new projects, but can simply rely on projects ready to go. The final section below provides examples of many of these projects.

Third, recent experience has demonstrated that major projects can be implemented quickly. Consider, for example, the tragic collapse of the I-35 bridge in Minneapolis that occurred in August 2007. The concrete for the replacement bridge began flowing last winter, and the bridge was recently opened for traffic – just over 1 year later and well ahead of schedule. A survey by The American Association of State Highway and Transportation Officials finds that “state transportation departments could award and begin more than 3,000 highway projects totaling approximately \$18 billion within 30-90 days from enactment of federal economic stimulus legislation.”

Further, funding for school repair and construction could be put in place by this summer. According to an NCES survey in 1999, 76% of all schools reported that they had deferred maintenance of their buildings and needed additional funding to bring them up to standard. The total deferred maintenance exceeded \$100 billion, an estimate in line with earlier findings by the Government Accounting Office.⁴

³ See GAO “Emergency Jobs Act of 2003: Funds spent slowly, few jobs created”, December 1986.

⁴ Lawrence Mishel, Ross Eisenbrey and John Irons, “Strategy for economic rebound: Smart stimulus to counteract the economic slowdown” Economic Policy Institute, January 11, 2008.

Fourth, given that a well-maintained infrastructure is in the national interest and that there are many projects that will need to be undertaken anyway (for example to repair or replace aging sewer systems), an acceleration of funding for the projects will address those needs. Even if a project is not perfectly timed, the funding should not be considered to be wasted or ineffective.

Finally, infrastructure investments should be seen as an insurance policy against a prolonged downturn. The stimulus package passed last January consisted primarily of rebate checks that have already been paid out and either spent or saved by consumers. Had that package included a boost to infrastructure investments (as EPI recommended at the time)⁵, we would today be seeing some job creation as a result of that investment boost. While the future path of the economy is uncertain, we do know that employment weakness will continue for a substantial period of time, and that including an infrastructure component can provide some insurance against a prolonged downturn. If the economy is still weak in 9 months, we don't want to be in a position of again looking back and asking "what if...".

Job Impact

The total number of jobs lost in the last two recessions as measured from the start of the downturn to the bottom was 1.6 million (1990-91) and 2.7 million (2001-03). As noted above, labor market weakness can persist for months and years after the start of a recession.

Estimates of the number of jobs created by \$1 billion of construction spending range from 14,000 to 47,000.⁶ Using the conservative estimate, a \$75 billion boost would support over 1 million jobs. While this would not fully offset projected losses, it would reduce the size of the drop and would reduce the total recovery time. Because of the reach on the construction and transportation sectors, these jobs would be spread throughout the economy.

The estimates presented above do not fully capture the impact of different kinds of public investment. For example, investments in "fix-it-first" projects are likely to have a greater job impact per dollar spent because a smaller share of the money would be spent on materials, while a greater share would be spent on labor. The same is likely true of projects that promote energy efficiency through, e.g., retrofitting of existing buildings.

Breakdown by industry and job quality

Besides the top-line number of total jobs created by a given amount of infrastructure spending, assessing the effect of capital investments on labor market outcomes also requires knowing something about the "upstream" (or supplier) jobs created by this spending.

Table 1 shows how many jobs in upstream industries are created by every 1,000 jobs created in various categories of infrastructure spending.⁷ Specifically, we track two possibilities: investment in construction

⁵ Ibid.

⁶ Ibid.

⁷ The calculations in this table were conducted by EPI economist L. Josh Bivens and utilize the employment requirements tables of the Bureau of Labor Statistics (BLS). The employment requirements tables actually present

and rail. Every 1,000 jobs created through investment in construction will support 610 total upstream jobs. Of these upstream jobs, 64% are created in four sectors: manufacturing, retail, professional/scientific/ technical services, and administrative, support, waste management and remediation services.

TABLE 1. UPSTREAM JOB CREATION PER 1,000 SECTOR-SPECIFIC JOBS

	Construction	Rail	Passenger Rail
Agriculture, forestry, fishing, and hunting	6	5	1
Mining	7	6	6
Utilities	5	2	3
Construction	1000	5	3
Manufacturing	134	102	58
Wholesale trade	33	50	53
Retail trade	106	19	22
Transportation and warehousing	37	1000	1000
Information	12	15	9
Finance and insurance	20	38	15
Real estate and rental and leasing	13	36	8
Professional, scientific, and technical services	84	88	72
Management of companies and enterprises	9	8	11
Administrative and support and waste management and remediation services	68	84	45
Educational services	2	4	1
Health care and social assistance	2	2	0
Arts, entertainment, and recreation	5	5	3
Accommodation and food services	14	18	9
Other services	14	11	10
Government	39	88	564
Total Upstream	610	587	894

Every 1,000 jobs created through investment in rail transport supports 587 total upstream jobs. Of these upstream jobs, 62% are created in four sectors: manufacturing, wholesale, professional/scientific/ technical services, and government. Investments in passenger rail would support even more upstream jobs.

Manufacturing and professional/technical/scientific services combined comprise over 35% of the upstream jobs, and both of these sectors are characterized by much higher hourly compensation than the economy-wide average. Of the remaining upstream sectors, only retail trade and administrative and support and waste management and remediation services (together comprising 23% the upstream jobs) are characterized by hourly compensation below the economy-wide level.

very detailed industry employment linkages between 201 separate industries. Table 1 aggregates these industries into 20 larger super-sectors.

These super-sector (and more-detailed industry) breakdowns are the first step that allows for a detailed accounting of what a given level and type of infrastructure investment implies for relative demands for workers of different educational attainment, experience levels, genders, regions, and ethnic backgrounds.

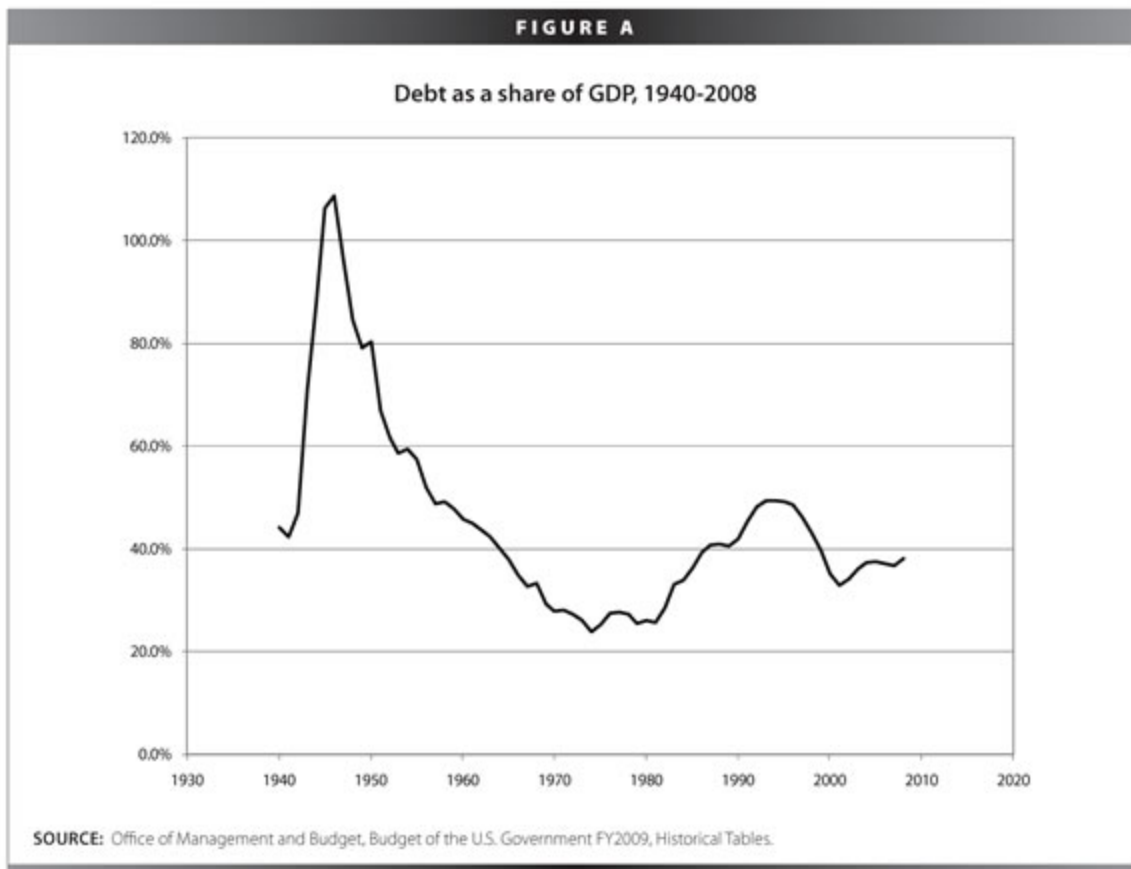
Financing

To have the greatest impact on the economy, the recovery package should be deficit financed.⁸ While deficits should not be ignored, it is also important to remember where deficits currently stand in relation to recent history. In 2007, deficits were just 1.2% of gross domestic product, lower than any year since 1974 (with the exception of the latter 1990s). This year we saw an uptick in deficits to 3.2% of GDP, but that is primarily due to the economy's slowdown (with the attendant loss of revenues and higher spending) coupled with the one-time stimulus last summer. This 3.2% is still well below the 4.7%-of-GDP deficit inherited by the Clinton administration in 1992, which was turned into surpluses with just six years of prudent policy as the economy recovered.

In light of current economic developments, rising deficits are inevitable for the next couple of years. We know from history that increasing taxes on the middle class or cutting back on federal spending in the midst of a recession will only make things worse by reducing the demand for goods and services, thereby exacerbating the downturn. As a consequence, deficit reduction must take a back seat to short-term stimulus for the moment.

But how far can the government go to help prod the economy? The government can still continue to borrow at very low interest rates and current levels of debt do not typically create excessive instabilities. Despite the fact that the budget surpluses inherited by President Bush have since been turned to deficits, the overall national debt as a share of the economy—at about 40%—is still on the low end of the historical norm (see Figure A).

⁸ This section draws from John Irons, “The false fiscal dilemma“ EPI Policy Memorandum #130, October 21, 2008



So by historical standards, there is room to fund stimulus and other initiatives, even without additional revenue. And though we cannot simply ignore the overall budget situation, allowing a temporary increase in the national debt next year to levels no higher than what we averaged in the 1990s (46.1%) would allow room for about \$900 billion in additional debt. This level would fully cover the new debt required to finance the \$700 billion Wall Street bailout as well as fund a substantial \$150-200 billion stimulus for Main Street and the broader economy in 2009. Allowing the debt to increase by 2010 to no higher than the 1990s peak (49.4%), would allow \$1.3 trillion to be used over the next two years to cover the bailout, a stimulus, and provide a substantial jump-start for investments in job creation, energy independence, and other priorities.

However, over the long-term, Congress will need to address on-going funding for transportation more broadly. For example, Congress will look at surface transportation legislation next year, and funding mechanisms should be part of that discussion as well.

Composition of Infrastructure Investments

As noted above, a total package on the order of \$75 billion would be an essential part of a broader recovery package.

Despite the need for a timely intervention, infrastructure should be done wisely. We must undertake projects that are environmentally sustainable, that address maintenance needs first, and that serve the public interest. The focus on sustainability would help to ensure that dollars are spent wisely, and the focus on maintenance would lead to the creation of a greatest number of jobs in the shortest amount of time.

To implement, we must also look at a broad range of investments that will meet the public interest – for example, we cannot build roads and bridges simply for the sake of employing more people. But rather, Congress should look at public transit needs broadly, especially given the desire for energy efficiency and independence. Already, we have seen demand for public transit rise in cities across the nation as gas prices have spiked; further investments in public transit certainly seem warranted to meet this need.⁹

With that in mind there are several areas that should be part of a recovery package—including investments in transportation, in water and sewer systems, and in school buildings—that would serve the dual purpose of timely job creation and rebuilding national infrastructure.

Several areas of investment have already been identified as ready-to-go:

- *Transit projects:* 246 ready-to-go projects totaling more than \$3.6 billion, could be implemented within 90 days of federal funding (American Public Transportation Association).
- *New transit projects:* Approximately 400 projects totaling \$248 billion proposed, with 58 of those—totaling \$25.2 billion—far along in the planning process. Most of those 58 projects have already completed the environmental process and could begin within 4 months to a year (Reconnecting America).
- *Highway:* 3,000 ready-to-go projects totaling \$18 billion (American Association of State and Highway Transit Officials).
- *Bicycle/pedestrian projects:* \$325 million in ready-to-go projects (America Bikes).
- *Fleet Greening:* \$3.9 billion for clean vehicles, and retrofitting existing vehicles with green technology (Transportation for America).
- *Wastewater treatment projects:* \$4 billion in ready to go projects (National Association of Clean Water Agencies).
- *School repair and maintenance:* \$10 billion could be spent this summer (Economic Policy Institute).

⁹ As a result, Congress may want to revisit the 80-20 split in federal funding for transportation; and may wish to attach specific funding requirements to ensure that projects are ready to go.

The projects above are merely examples of the types of projects that could be started or resumed quickly if Congress provided funds. These project lists are by no means comprehensive—many states that have ready-to-go projects did not respond to these surveys, and most of the lists are narrowly targeted to a specific type of project, leaving out other ready-to-go projects that did not fit within the designated category. While the precise number of ready-to-go projects may be unknown, it is clear that there are enough available for funding to allow Congress to invest significant resources in infrastructure and see the resulting job creation and economic growth within a relatively short period of time.